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Stollenwerck, III

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(54) **COOLER DIVIDER**

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Related U.S. Application Data

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(51) **Int. Cl.**
F25D 23/06 (2006.01)
F25D 23/08 (2006.01)

(52) **U.S. Cl.**
CPC ***F25D 23/069*** (2013.01); ***F25D 23/068*** (2013.01); ***F25D 23/087*** (2013.01)

(58) **Field of Classification Search**
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USPC 62/457.1
See application file for complete search history.

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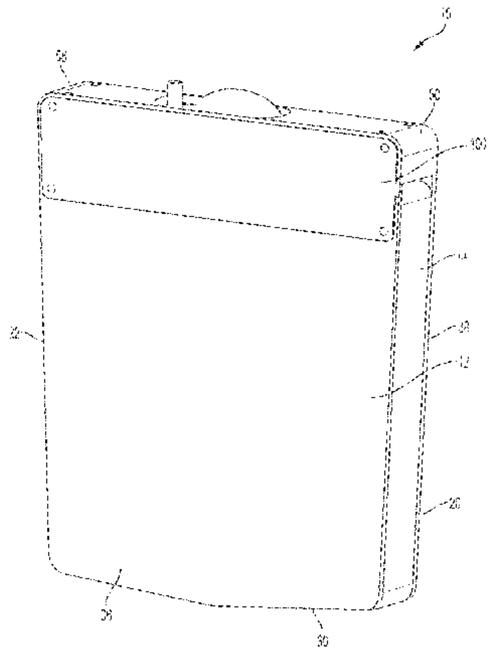
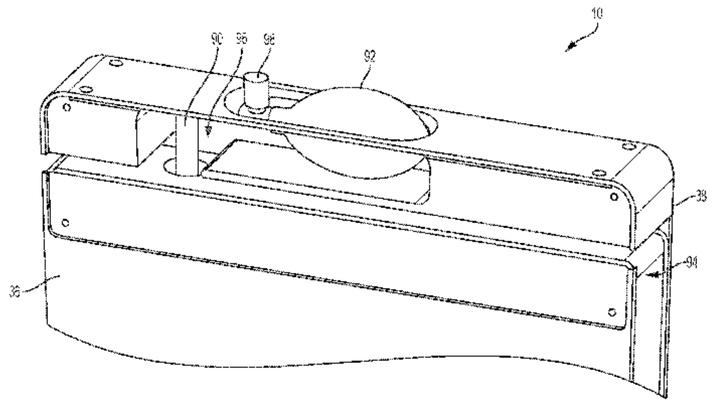
(57) **ABSTRACT**

A divider device for dividing an interior chamber of a cooler into a plurality of separate chambers and preventing fluid flow between the plurality of chambers. The divider device has a dividing wall that is insertable into the interior chamber of the cooler. A waterproof seal is positioned around the outer surfaces of the dividing wall. The seal is inflatable by a pump that is part of the divider device such that the seal is urged into contact with walls of the interior chamber to form a fluid-tight seal that prevents fluid flow from a first side of the dividing wall to a second side of the dividing wall.

22 Claims, 10 Drawing Sheets





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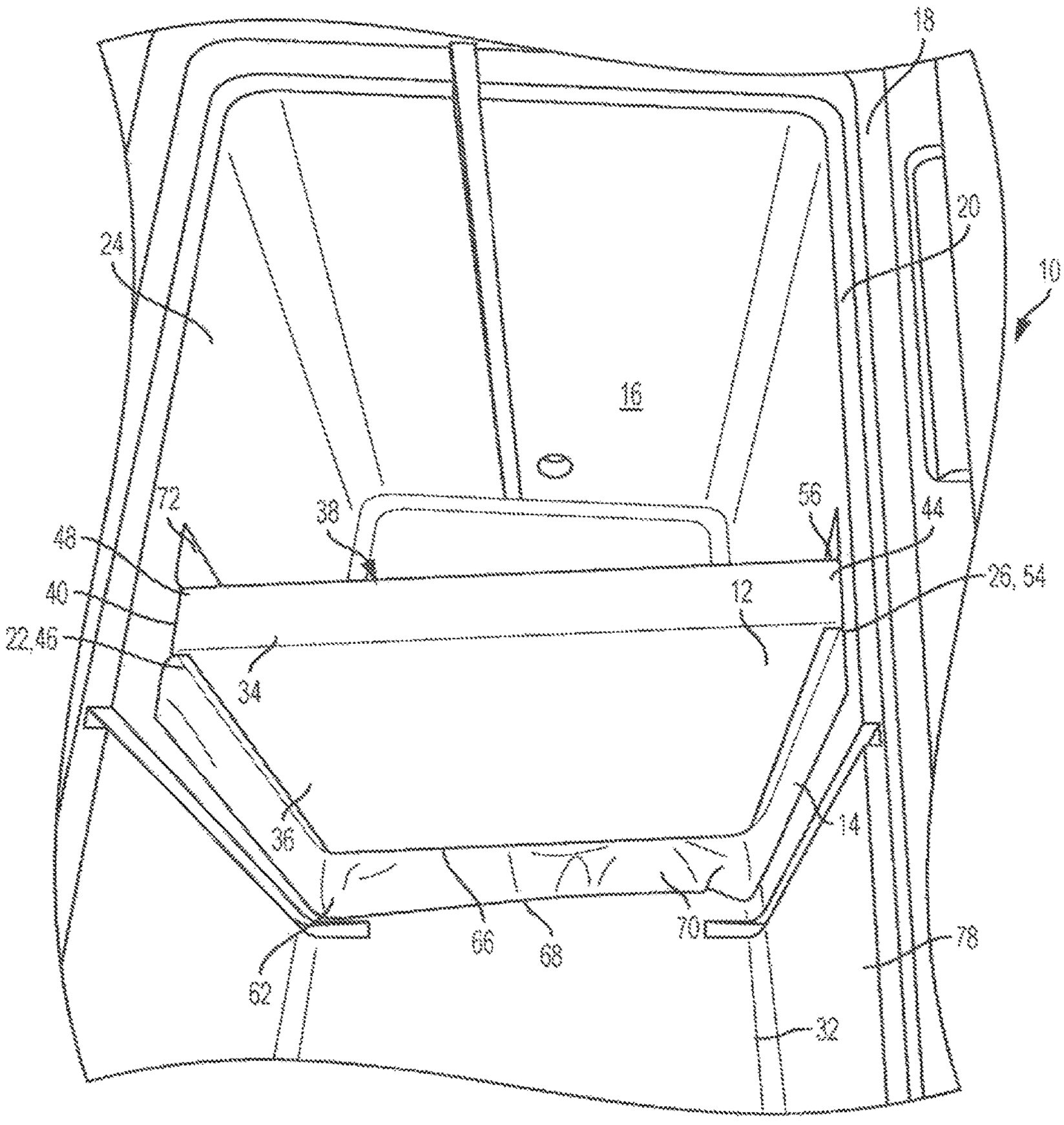
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FIG. 1

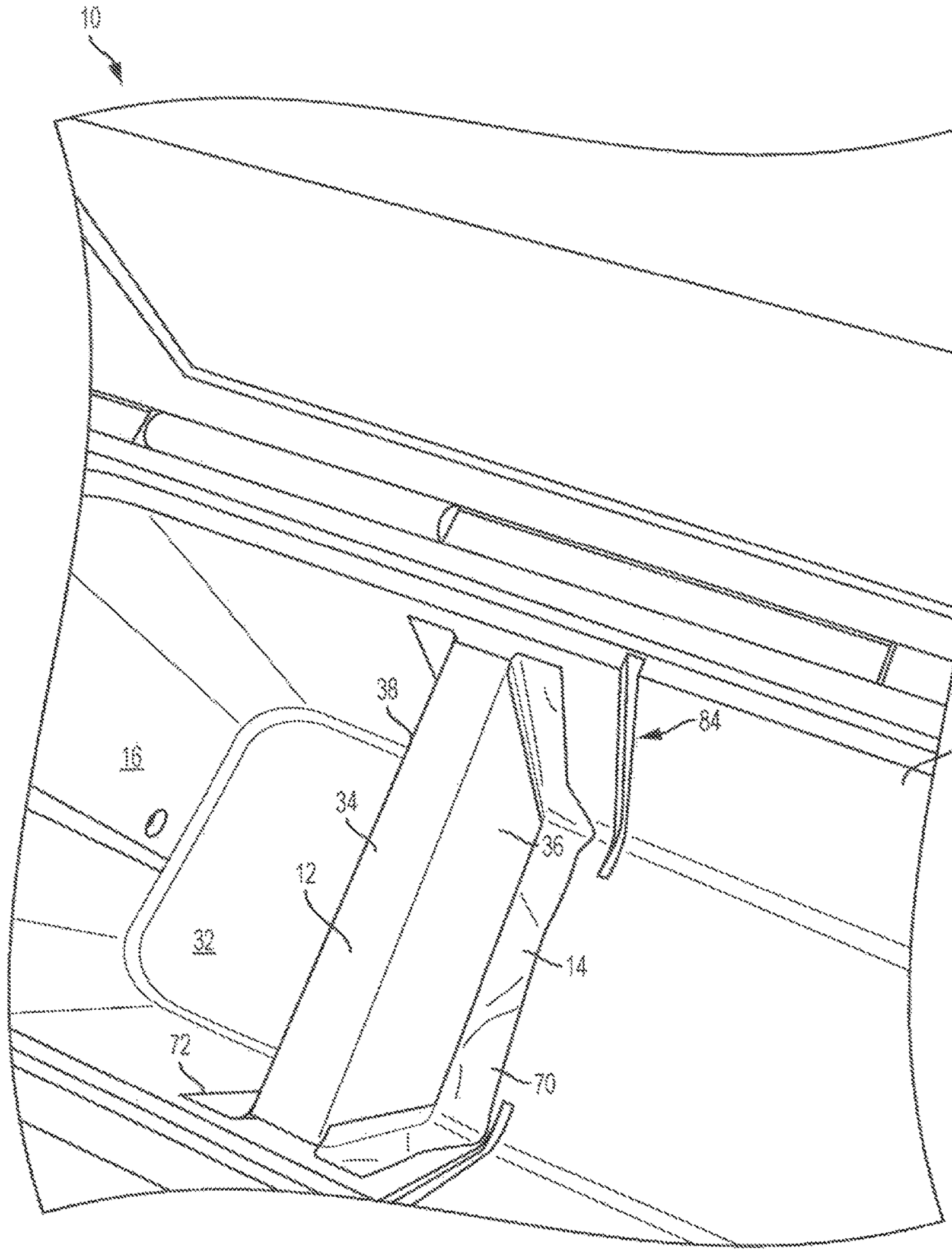

FIG. 2

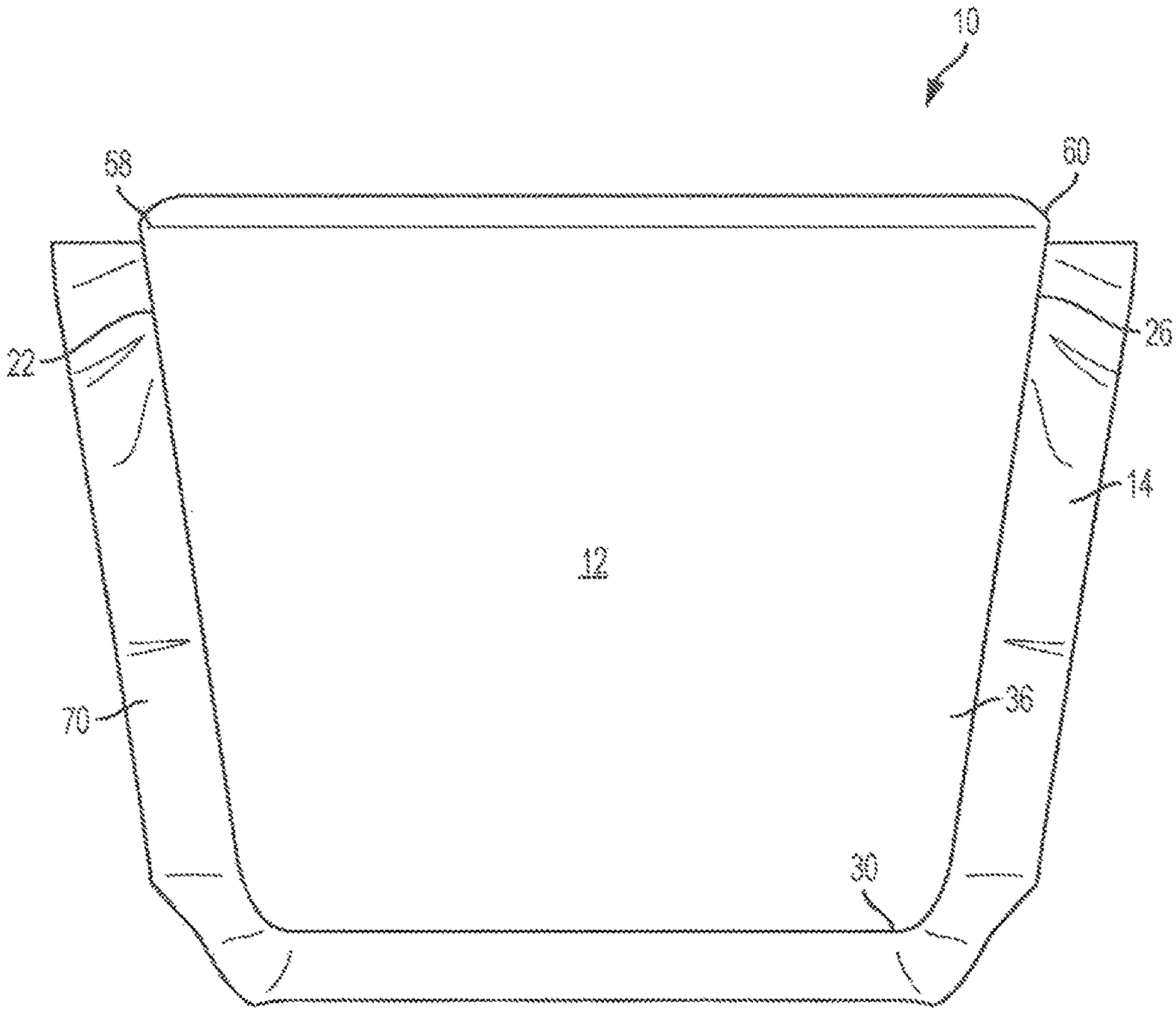

FIG. 3

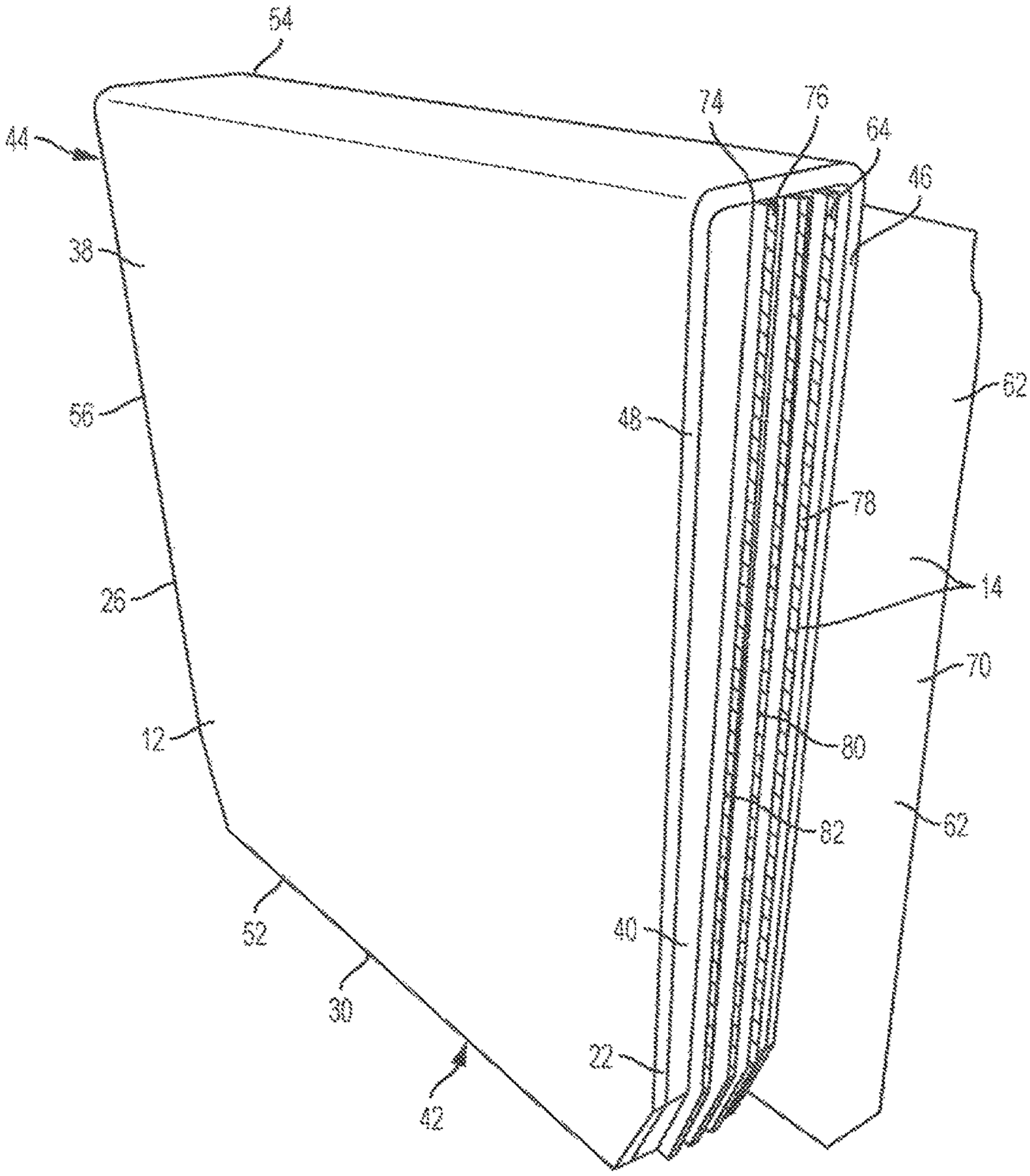

FIG. 4

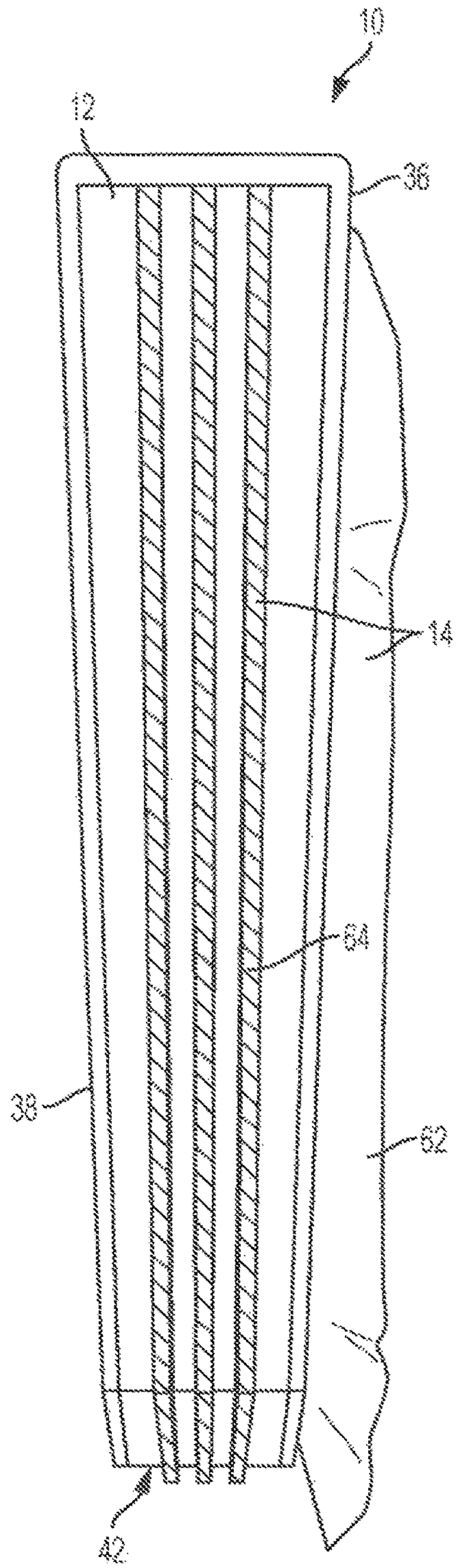

FIG. 5

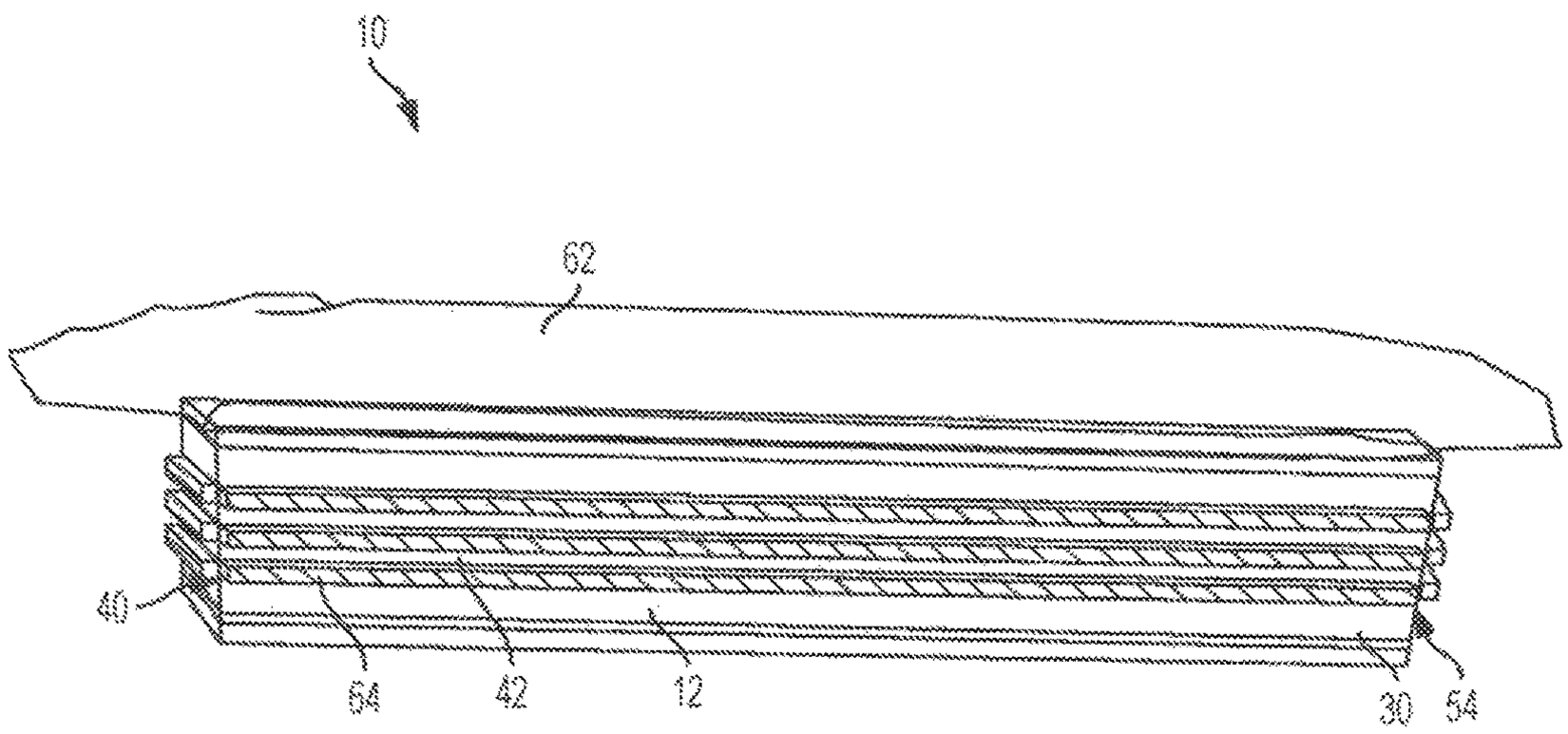

FIG. 6

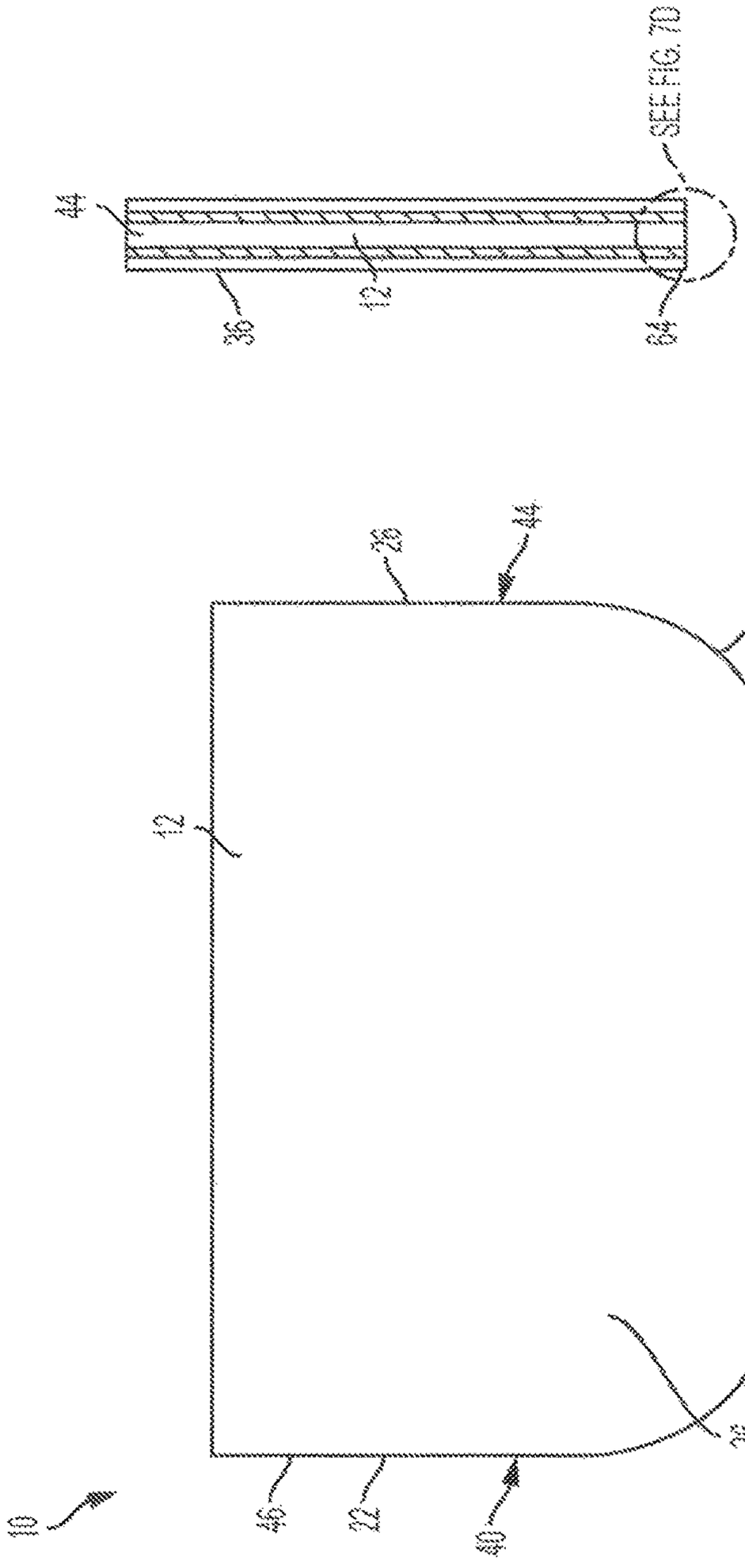

FIG. 7A

FIG. 7C

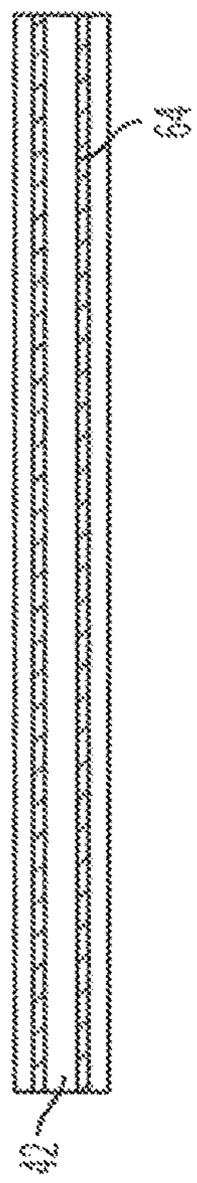

FIG. 7B

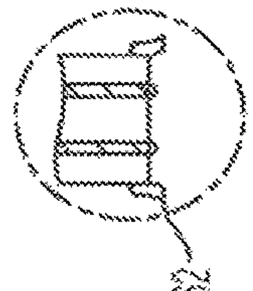

FIG. 7D

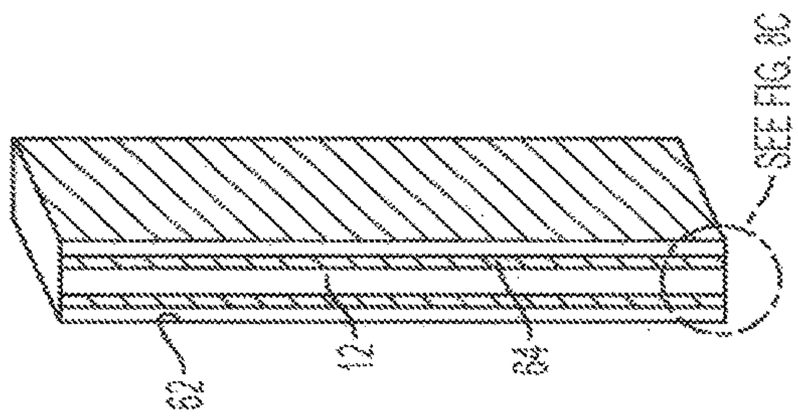

FIG. 8B

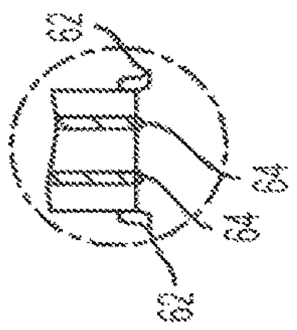

FIG. 8C

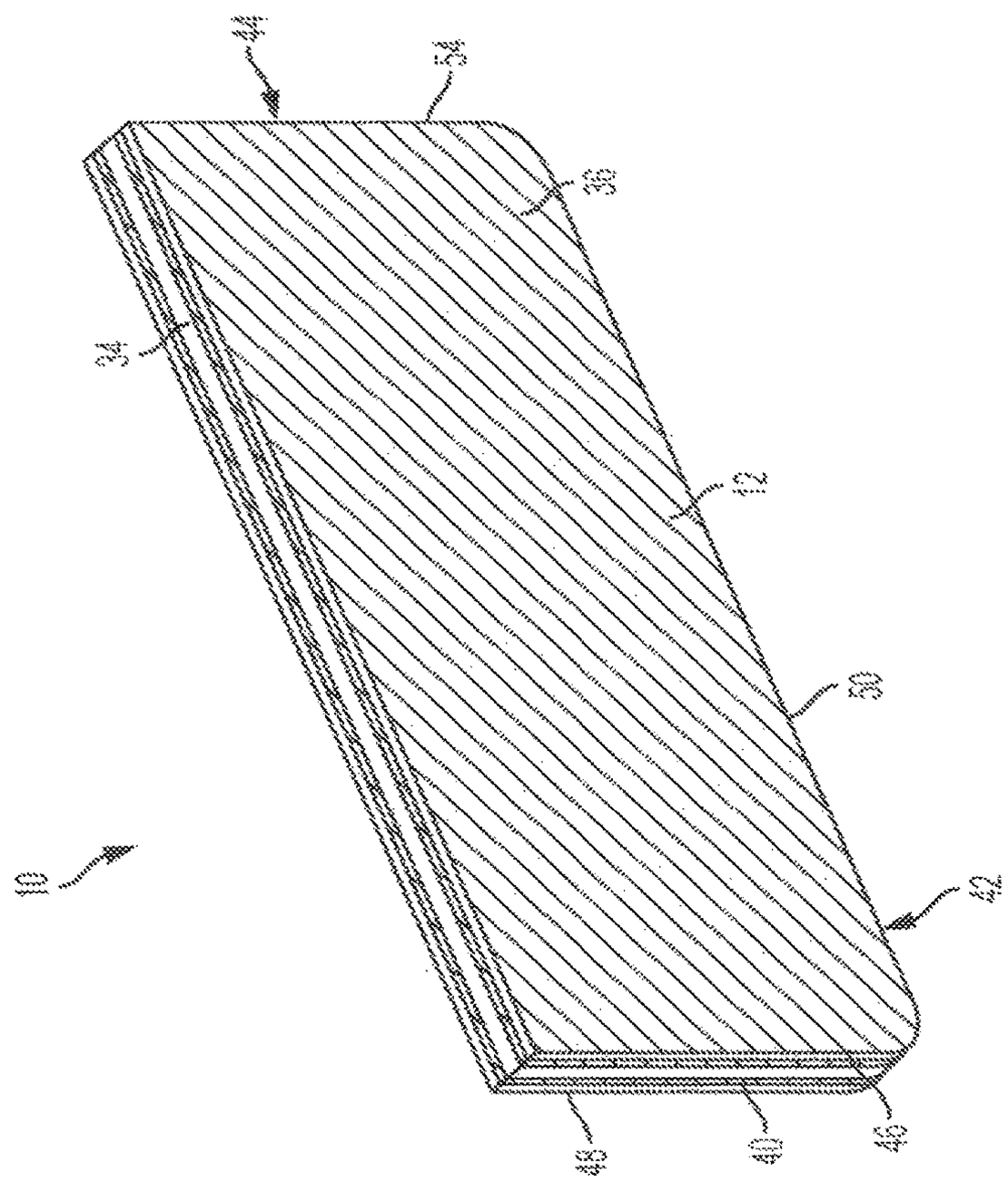

FIG. 8A

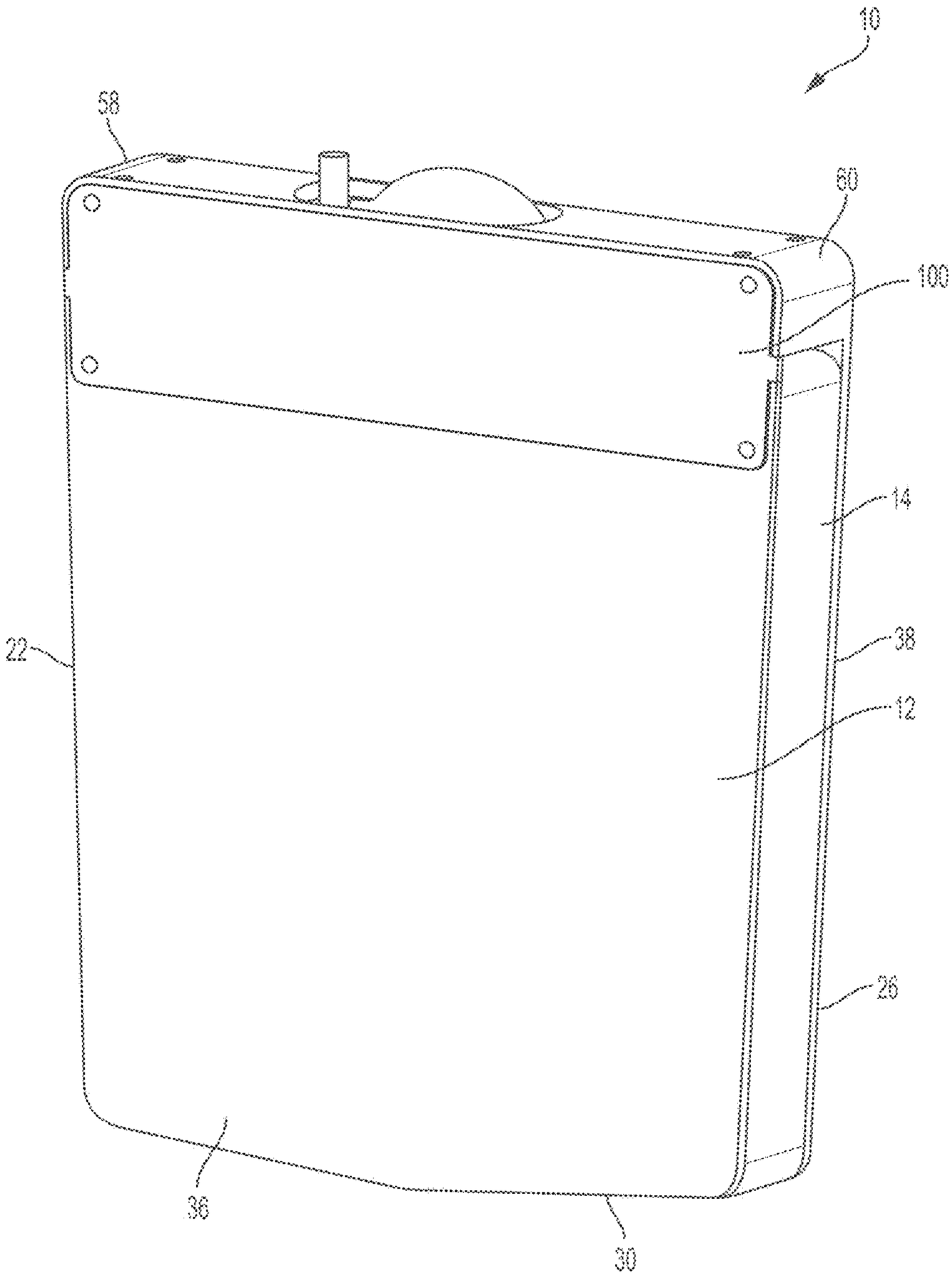

FIG. 9

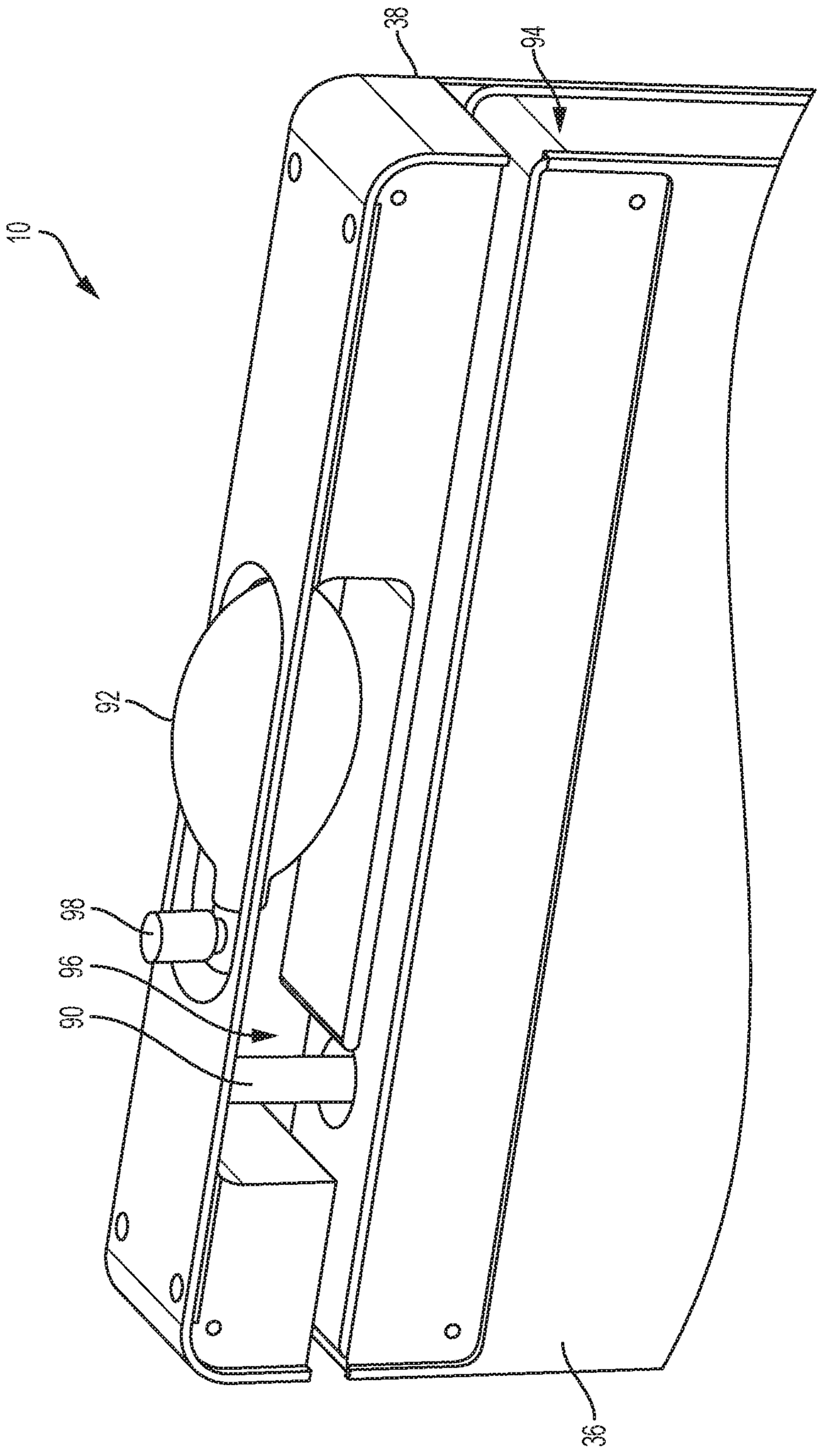

FIG. 10

COOLER DIVIDER

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

This application is a continuation-in-part of U.S. application Ser. No. 15/647,177, filed Jul. 11, 2017, which claims the benefit of priority of U.S. Provisional Application No. 62/360,508 filed on Jul. 11, 2016, and this application claims the benefit of priority of U.S. Provisional Application No. 62/539,503 filed on Jul. 31, 2017, the entire disclosure of each of which is hereby incorporated by reference herein in its entirety.

FIELD OF THE INVENTION

The present invention relates generally to a device and system that can be used to divide an interior chamber of a cooler into a plurality of chambers. More specifically, the present invention relates to a device and system comprising a divider for a cooler that separates the interior chamber of the cooler into a plurality of separate chambers and that prevents or restricts fluid flow between the plurality of chambers.

BACKGROUND OF THE INVENTION

The contents of a conventional ice chest or cooler is cooled with ice placed in the cooler. As the ice melts, however, items placed in the cooler often become wet. Over time, more ice in the cooler melts and can submerge all items that accompany it. This can be a significant problem if items in the cooler are lightly packed, for example, as sandwiches and chips typically are. It is possible that the affected items will be completely ruined when submerged.

When using a cooler with hunting and/or fishing, any caught animals such as a fish, bird and the like can be placed in the cooler to prevent the meat from spoiling. However, blood and other fluids from the animal can contaminate items in the cooler. For example, blood from a fish could leak from the fish and onto a beverage can or food item also placed in the cooler.

Accordingly, it is desirable to provide a device for a cooler that can easily separate the interior chamber of the cooler into separate compartments that can prevent water and other fluids from traveling between compartments while allowing heat transfer between the compartments.

SUMMARY

Presented herein are devices and systems for dividing an interior chamber of an ice chest or cooler into a plurality of separate chambers that prevent and/or restrict fluid flow among the plurality of chambers. The system comprises a dividing wall that is selectively insertable into the interior chamber of the cooler. A seal can be positioned around a left edge, a bottom edge, and a right edge of the dividing wall such that the seal can prevent and/or restrict fluid flow from a first side of the dividing wall to a second side of the dividing wall.

In one aspect, the dividing wall can be sized and shaped to correspond to the size and shape of the interior chamber of a cooler so that a complementary relationship can be formed between the dividing wall and an interior wall of the cooler. That is, at least a portion of the dividing wall can matingly engage the interior wall of the cooler. For example, the left edge of the dividing wall can be positioned in contact with or adjacent to a left side of the interior chamber. The right edge of the dividing wall can be positioned in contact with or adjacent to a right side of the interior chamber. The bottom edge of the dividing wall can be positioned in contact with or adjacent to a bottom side of the interior chamber.

The seal can be positioned and/or formed on at least one outer surface of the dividing wall that faces a side of the interior chamber of the cooler. In one aspect, the seal can be formed from a waterproof material such as silicon and the like so that contact between the seal and the wall of the interior chamber can prevent or restrict fluid flow past the seal. In another aspect, at least a portion of the seal can be flexible so that the portion of the seal can conform to the contour of the sides of the interior chamber.

In one aspect, the seal can comprise at least one blade and at least one rib positioned on an outer surface of the dividing wall. The blade can be formed with or positioned adjacent to an edge of the outer wall so that the blade is a continuous blade extending around the left edge, the right edge and the bottom edge of the dividing wall. In another aspect, the blade can extend away from the wall a predetermined distance and at a predetermined angle.

The at least one rib can be formed with or coupled to an outer surface of the dividing wall so that the rib is a continuous rib extending around the left edge, the right edge and the bottom edge of the dividing wall. In another aspect, the rib can be spaced from the blade a predetermined distance.

Alternatively, the seal can comprise at least one pump, at least one inner tube and at least one seal body. The inner tube can be positioned in a wall chamber defined in the dividing wall. The at least one pump can be in fluid communication with the inner tube. The seal body can be coupled to the at least one inner tube and/or a plurality of edges of the of the dividing wall so that the seal body is a continuous seal extending around at least a portion of the left edge, the right edge and the bottom edge of the dividing wall. Inflation of the inner tube with the pump can then urge the seal away from the dividing wall.

In use, the dividing wall can be positioned in the interior chamber of the cooler so that the dividing wall separates the interior chamber into at least two separate chambers. In one aspect, at least a portion of the seal positioned on or adjacent the left edge of the dividing wall can contact a wall of the interior chamber, at least a portion of the seal positioned on or adjacent the bottom edge of the dividing wall can contact the bottom surface of the interior chamber, and at least a portion of the seal positioned on or adjacent the right edge the dividing wall can contact a wall of the interior chamber. In this aspect, the contact between the seal and the wall or surface of the interior chamber can prevent fluid from passing the seal. Thus, the dividing wall placed in the interior chamber of the cooler can separate the interior chamber into two separate chambers, and the seal can prevent fluids from flowing between the two separate chambers.

Related methods of operation are also provided. Other apparatuses, methods, systems, features, and advantages of the devices and systems for dividing an interior chamber of an ice chest or cooler into a plurality of separate chambers will be or become apparent to one with skill in the art upon examination of the following figures and detailed description. It is intended that all such additional apparatuses, methods, systems, features, and advantages be included within this description, be within the scope of the devices and systems for dividing an interior chamber of an ice chest

or cooler into a plurality of separate chambers, and be protected by the accompanying claims.

DESCRIPTION OF THE FIGURES

FIG. **1** is a perspective view of the device and system for dividing an interior chamber of a cooler into a plurality of separate chambers of the present application, showing a dividing wall positioned in the interior chamber of the cooler, according to one aspect;

FIG. **2** is a second perspective view of the device of FIG. **1**, showing the dividing wall positioned in the interior chamber;

FIG. **3** is a front perspective view of the dividing wall of FIG. **1**;

FIG. **4** is a side perspective view of the dividing wall of FIG. **1**;

FIG. **5** is a side elevational view of the dividing wall of FIG. **1**;

FIG. **6** is a bottom elevational view of the dividing wall of FIG. **1**;

FIG. **7**A is a front elevational view of the dividing wall of FIG. **1**, according to one aspect;

FIG. **7**B is a bottom elevational view of the dividing wall of FIG. **1**, according to one aspect;

FIG. **7**C is a side elevational view of the dividing wall of FIG. **1**, according to one aspect;

FIG. **7**D is a cut out sectional view of a portion of FIG. **7**C;

FIG. **8**A is a front perspective view of the dividing wall of FIG. **1**, according to one aspect;

FIG. **8**B is a side perspective view of the dividing wall of FIG. **1**, according to one aspect;

FIG. **8**C is an exploded view of FIG. **8**B;

FIG. **9** is a front perspective view of a dividing wall of the device and system for dividing an interior chamber of a cooler into a plurality of separate chambers of the present application, according to one embodiment; and

FIG. **10** is a magnified, cut-away view of a portion of the dividing wall of FIG. **9**.

DESCRIPTION OF THE INVENTION

The present invention can be understood more readily by reference to the following detailed description, examples, and claims, and their previous and following description. Before the present system, devices, and/or methods are disclosed and described, it is to be understood that this invention is not limited to the specific systems, devices, and/or methods disclosed unless otherwise specified, as such can, of course, vary. It is also to be understood that the terminology used herein is for the purpose of describing particular aspects only and is not intended to be limiting.

The following description of the invention is provided as an enabling teaching of the invention in its best, currently known aspect. Those skilled in the relevant art will recognize that many changes can be made to the aspects described, while still obtaining the beneficial results of the present invention. It will also be apparent that some of the desired benefits of the present invention can be obtained by selecting some of the features of the present invention without utilizing other features. Accordingly, those who work in the art will recognize that many modifications and adaptations to the present invention are possible and can even be desirable in certain circumstances and are a part of the present invention. Thus, the following description is provided as illustrative of the principles of the present invention and not in limitation thereof

As used herein, the singular forms "a," "an" and "the" include plural referents unless the context clearly dictates otherwise. Thus, for example, reference to a "blade" includes aspects having two or more such blades unless the context clearly indicates otherwise.

Ranges can be expressed herein as from "about" one particular value, and/or to "about" another particular value. When such a range is expressed, another aspect includes from the one particular value and/or to the other particular value. Similarly, when values are expressed as approximations, by use of the antecedent "about," it will be understood that the particular value forms another aspect. It will be further understood that the endpoints of each of the ranges are significant both in relation to the other endpoint, and independently of the other endpoint.

As used herein, the terms "optional" or "optionally" mean that the subsequently described event or circumstance may or may not occur, and that the description includes instances where said event or circumstance occurs and instances where it does not.

The application relates to devices and systems for dividing an interior chamber of an ice chest or cooler into a plurality of separate chambers that prevent and/or restrict fluid flow among the plurality of chambers. As illustrated in the figures, the system **10** comprises a dividing wall **12** with a seal **14** positioned on at least one edge of the dividing wall. In one aspect, the dividing wall can be sized and shaped to correspond to the size and shape of the interior chamber **16** of a cooler **18** so that a complementary relationship can be formed between the dividing wall and an interior wall **20** of the cooler. That is, in use and described more fully below, the dividing wall **12** can be positioned in the interior chamber and at least a portion of the dividing wall can matingly engage the interior wall of the cooler to separate the interior chamber **16** into a plurality of chambers.

In one aspect, the dividing wall **12** can have a left edge **22** sized to correspond to the height of a first wall **24** of the interior chamber **16**, and an opposed right edge **26** sized to correspond to the height of a second wall **28** of the interior chamber that is opposed to the first wall. In another aspect, the length of the dividing wall **12** (i.e., the distance between the left edge and the right edge) can correspond to the width of the interior chamber (i.e., the distance between the first wall **24** and the second wall **28**). As used herein, "correspond" can mean "substantially the same" or, optionally, "slightly less than" such that a dimension of the dividing wall **12** can be slightly less than a mating dimension of the interior chamber **16** of the cooler **18** to allow the seal **14** to be positioned between the dividing wall and the walls of the interior chamber. In another aspect, the dividing wall can have a bottom edge **30** configured to be positioned on the bottom surface **32** of the interior chamber, and an upper edge **34** opposed to the bottom edge. The distance between the bottom edge and the upper edge can be substantially the same or less than the height of the interior chamber **16**. For example, the distance between the bottom edge **30** and the upper edge **34** can be about 90%, 80%, 70%, 60%, 50%, 40%, 30%, 20% or about 10% of the height of the interior chamber **16**.

The dividing wall **12** can have a first surface **36** and a second surface **38** that is spaced from the first surface by a thickness of the dividing wall. In one aspect, the dividing wall **12** can be formed from similar materials as those used to make the cooler **18**. For example, if the cooler is a polyurethane foam cooler, the dividing wall can be formed

from polyurethane foam. In one aspect, the dividing wall can have a thickness similar to a thickness of a wall of the cooler so that the dividing wall **12** can have similar insulating properties as the wall of the cooler. For example, if the wall of the cooler **18** is two inches thick and is formed from high impact plastic with an insulating core, the dividing wall **12** can be two inches thick and formed from high impact plastic with an insulating core (that is, the first surface **36** of the dividing wall can be spaced from the second surface **38** about two inches).

Optionally, in another aspect, the dividing wall **12** can have dissimilar insulating properties as the wall of the cooler **18**. For example, the dividing wall can be non-insulated to promote heat transfer between the plurality of chambers formed in the interior chamber **16** of the cooler. Thus, in this aspect, the seal **14** can be positioned on at least a portion of the dividing wall to prevent and/or restrict fluid flow between the plurality of chambers formed by the dividing wall **12** while the dividing wall promotes heat transfer between the plurality of chambers relative to an insulated dividing wall.

In one aspect, a third surface **40** can extend along the left edge **22** of the dividing wall between the first surface **36** and the second surface **38**, a fourth surface **42** can extend along the bottom edge **30** of the dividing wall between the first surface and the second surface, and a fifth surface **44** can extend along the right edge **26** of the dividing wall between the first surface **36** and the second surface **38**. Each of the first, second, third, fourth and fifth surfaces can be substantially planar. Optionally, however, at least a portion of one of the first, second, third, fourth and fifth surfaces can be curved.

In one aspect, a first edge **46** can be formed at the intersection of the first surface **36** and the third surface **40**, a second edge **48** can be formed at the intersection of the second surface **38** and the third surface, a third edge **50** can be formed at the intersection of the first surface and the fourth surface **42**, a fourth edge **52** can be formed at the intersection of the second surface **38** and the fourth surface **42**, a fifth edge **54** can be formed at the intersection of the first surface **36** and the fifth surface **44**, and a sixth edge **56** can be formed at the intersection of the second surface **38** and the fifth surface. In another aspect, the intersection between the third surface **40** and the fourth surface **42** can be configured to correspond to the interior chamber of the cooler. For example, an intersection **57** between the third surface and the fourth surface can be curved to correspond to a radius in the interior chamber **16**. Similarly, in another aspect, an intersection **59** between the fourth surface **42** and the fifth surface **44** can be configured to correspond to the interior chamber of the cooler **18**. For example, the intersection between the fourth surface and the fifth surface can be curved to correspond to a radius in the interior chamber **16**.

The seal **14** can comprise at least one sealing material positioned and/or formed on at least one of the left edge **22**, the right edge **26** and the bottom edge **30** of the dividing wall **12**. In one aspect, the seal **14** can be a continuous seal extending for the entire length of the left edge, the right edge and/or the bottom edge. Optionally, in another aspect, the seal **14** can be spaced from an upper end **58** of the left edge **22** and/or an upper end **60** of the right edge **26** by about less than ⅛ inch, about ⅛ inch, about ¼ inch, about ⅜ inch, about ½ inch, or more than ½ inch. The space between the seal and the upper end of the left edge can be substantially the same as the space between the seal **14** and the upper end of the right edge. Optionally, however, the space between the seal and the upper end **58** of the left edge **22** can be less than or greater than the space between the seal **14** and the upper end **60** of the right edge **26**. In one aspect, at least a portion of the seal can be accordioned to accommodate sharp angles or curves in the interior chamber **16** of the cooler **18** while still maintaining a seal. It is contemplated, however, that in most cases the flexibility of the sealing material can allow for the sealing of sharp angles or curves in the interior chamber of the cooler while still maintaining a seal **14** without needing to be accordioned.

In one aspect and as illustrated in FIGS. **1-8**, the seal **14** can comprise at least one blade **62** and at least one rib **64**. The at least one blade and the at least one rib can be formed from a waterproof material, such as silicon, rubber and the like. The blade can have a predetermined width extending from a proximal edge **66** to a distal edge **68** of the blade. In another aspect, the blade can have a width of less than ¼ inch, about ¼ inch, about ½ inch, about ¾ inch, about 1 inch, about 1¼ inch, about 1½ inch, about 1¾ inch, about 2 inches, about 2¼ inches, about 2½ inches, about 2¾ inches, about 3 inches or greater than about 3 inches.

In a further aspect, the blade **62** can have a thickness of greater than about 1 inch, about ⅞ inch, about ¾ inch, about ⅝ inch, about ½ inch, about ⅜ inch, about ¼ inch, about ⅛ inch, about 1/16 inch, about 1/32 inch or less than about 1/32 inch. The thickness of the blade can be substantially constant between the proximal edge **66** and the distal edge **68**, according to one aspect. Optionally, however, the thickness of the blade **62** can taper from the proximal edge to the distal edge. For example, the thickness of the blade at the proximal edge can be about ¼ inch and the thickness of the blade **62** at the distal edge can be about 1 mm.

The proximal edge **66** of the blade **62** can be coupled to or formed with the left edge **22**, the right edge **26** and the bottom edge **30** of the dividing wall **12** so that the blade is a continuous blade, according to one aspect. In another aspect, the at least one blade can comprise a plurality of blades such that a first blade **70** is coupled to or formed with the first surface **36** of the dividing wall **12** and a second blade **72** is coupled to or formed with the second surface **38** of the dividing wall. For example, the blade can be coupled to or formed with any or all of the first edge **46**, the second edge **48**, the third edge **50**, the fourth edge **52**, the fifth edge **54** and the sixth edge **56**. In another example the blade **62** can be coupled to or formed adjacent to any or all of the first, second, third, fourth, fifth and sixth edges.

In one aspect, the blade **62** can be coupled to or formed with the dividing wall **12** so that the distal edge **68** of the blade can extend away from the dividing wall at a predetermined angle. For example, the blade **62** can extend away from the dividing wall **12** at an acute angle between the blade and a plane of the surface of the dividing wall. In another example, the blade **62** can extend away from the dividing wall **12** at a substantially right angle between the blade and a plane of the surface of the dividing wall. In still another example, the blade **62** can extend away from the dividing wall **12** substantially parallel to a surface of the dividing wall.

The at least one rib **64** of the seal **14** can have a predetermined width extending from a proximal edge **74** to a distal edge **76** of the rib. In one aspect, the at least one rib **64** can have a width less than the width of the blade **62**. In another aspect, the rib **64** can have a width of less than 1/32 inch, about 1/32 inch, about 1/16 inch, about ⅛ inch, about ¼ inch, about ⅜ inch, about ½ inch, about ⅝ inch, about ¾ inch, about ⅞ inch, about 1 inch or greater than 1 inch.

In a further aspect, the rib **64** can have a thickness of greater than about 1 inch, about ⅞ inch, about ¾ inch, about ⅝ inch, about ½ inch, about ⅜ inch, about ¼ inch, about ⅛ inch, about 1/16 inch, about 1/32 inch or less than about 1/32 inch. The thickness of the rib can be substantially constant between the proximal edge **74** and the distal edge **76** of the rib, according to one aspect. Optionally, however, the thickness of the rib **64** can taper from the proximal edge to the distal edge. For example, the thickness of the rib at the proximal edge **74** can be about ¼ inch and the thickness of the rib at the distal edge **76** of the rib **64** can be about 1 mm.

The proximal edge **74** of the rib **64** can be coupled to or formed with the third surface **40**, the fourth surface **42** and/or the fifth surface **44** of the dividing wall **12**, according to one aspect. For example, the rib can be coupled to or formed with the third surface, the fourth surface, and the fifth surface so that the rib **64** is a continuous rib extending around the left edge **22**, the right edge **26** and the bottom edge **30** of the dividing wall.

In one aspect, the rib **64** can be coupled to or formed with the dividing wall **12** so that the distal edge **76** of the rib can extend away from the dividing wall at a predetermined angle. For example, the rib **64** can extend away from the dividing wall **12** at an acute angle between the rib and a plane of the surface of the dividing wall. In another example, the rib **64** can extend away from the dividing wall **12** at a substantially right angle between the rib and a plane of the surface of the dividing wall. In still another example, the rib **64** can extend away from the dividing wall **12** substantially parallel to a surface of the dividing wall.

In one aspect, the at least one rib **64** can comprise a plurality of ribs extending around the left edge **22**, the right edge **26** and/or the bottom edge **30** of the dividing wall **12**. Each of the plurality of ribs can be spaced from each other a predetermined distance. For example, a first rib **78** can be spaced from the first blade **70** a predetermined distance, a second rib **80** can be spaced from the first rib, and a third rib **82** can be spaced from the second rib and the second blade **72**. In other examples, there can be a fourth, fifth, sixth, seventh, eighth, ninth, tenth or more than ten ribs. Each of the ribs can be substantially parallel to each other. Optionally, however, in one aspect, at least one rib **64** of the plurality of ribs can be at an acute angle relative to an adjacent rib. In another aspect, the predetermined distance between each of the ribs **64** and/or blades **62** can be substantially the same. Optionally, however, the predetermined distance between each of the ribs and/or blades can be different. In use, the dividing wall **12** can be selectively positioned in the interior chamber **16** of the cooler **18** so that the dividing wall separates the interior chamber into two separate chambers. The seal **14** of the dividing wall can prevent fluid from flowing between the two separate chambers. In one aspect, at least a portion of the seal **14** positioned on the left edge **22** and/or the third surface **40** of the dividing wall **12** can contact the first wall **24** of the interior chamber, at least a portion of the seal positioned on the bottom edge **30** and/or the fourth surface **42** of the dividing wall can contact the bottom surface **32** of the interior chamber **16**, and at least a portion of the seal **14** positioned on the right edge **26** and/or the fifth surface **44** of the dividing wall can contact the second wall **28** of the interior chamber. In this aspect, the contact between seal and the wall or surface of the interior chamber **16** can prevent fluid from passing the seal **14**.

To form the fluid-tight seal, in one aspect, the first blade **70** of the seal **14** can extend away from the first surface **36** of the dividing wall **12**. As the first blade can be formed from a waterproof material, such as silicon, rubber and the like, the first blade can contact the first wall **24**, the second wall **28**, and the bottom surface **32** to prevent or restrict fluid from passing the first blade. Similarly, the at least one rib **64** can extend away from the third surface **44**, the fourth surface **46**, and the fifth surface **48** of the dividing wall. As each rib of the at least one rib can be formed from a waterproof material, each rib **64** can contact the first wall **24**, the second wall **28**, and the bottom surface **32** to prevent or restrict fluid from passing past each rib. Finally, in one aspect, the second blade **72** of the seal can extend away from the second surface **38** of the dividing wall **12**. As the second blade can be formed from a waterproof material, the second blade can contact the first wall **24**, the second wall **28**, and the bottom surface **32** to prevent or restrict fluid from passing past the second blade. Thus, even if a non-perfect seal is formed between a blade **64** and/or a rib **66** and the interior chamber **16**, the redundant ribs and/or blade can still prevent fluid from passing from the first surface **36** of the dividing wall past the seal **14** and to the second surface **38**.

In one embodiment and as illustrated in FIGS. **9-10**, the seal **14** can comprise at least one inner tube **90**, at least one pump **92** and at least one seal body **94**. The at least one inner tube and the at least one seal body can be formed from a waterproof material, such as silicon, rubber and the like. The at least one pump can inflate the inner tube so that the tube exerts a desired pressure on the seal. Portions of the inner tube **90**, the at least one pump **92** and the at least one seal body can be positioned within a wall chamber **96** defined between the first surface **36** and the second surface **38** of the dividing wall **12**. Optionally, at least one removable panel **100** can be provided to provide access to the wall chamber **96** through the first surface and/or the second surface.

In this aspect, the at least one inner tube **90** can be positioned between the first surface **36** and the second surface **38** of the dividing wall **12**. For example, the inner tube can be positioned adjacent or near the left edge **22**, the right edge **26** and/or the bottom edge **30** of the dividing wall **12**. Optionally, the at least one inner tube can comprise a plurality of inner tubes. For example, a first inner tube can be positioned adjacent the left edge, a second inner tube can be positioned adjacent the right edge, and a third inner tube can be positioned adjacent a bottom edge of the dividing wall **12**. The at least one inner tube can have a tube chamber that is in sealed fluid communication with the at least one pump **92**.

The at least one seal body **94** can be a flexible seal body coupled to the inner tube **90**. Alternatively, the at least one seal body can be coupled to the left edge **22**, the right edge **26**, and/or the bottom edge **30** of the dividing wall **12**. That is, the seal body can be formed with or positioned adjacent to an edge of the outer wall so that the seal body is a continuous seal extending around at least a portion of the left edge, the right edge and the bottom edge of the dividing wall. Optionally, in another aspect, the seal body **94** can be spaced from the upper end **58** of the left edge **22** and/or the upper end **60** of the right edge **26** by about less than ⅛ inch, about ⅛ inch, about ¼ inch, about ⅜ inch, about ½ inch, or more than ½ inch. The space between the seal body and the upper end of the left edge can be substantially the same as the space between the seal body **94** and the upper end of the right edge.

In another aspect, without pressure being exerted by the inner tube **92** on the seal body **94**, the seal body can be positioned within the wall chamber **96**. When pressure is exerted by the inner tube **92** on the seal body **94**, the seal body can extend away from the wall a predetermined distance and at a predetermined angle.

In one aspect, the seal body **94** can have a seal width substantially the same as the width of the dividing wall **12**. Optionally, the seal width can be slightly less or much less than the width of the dividing wall.

The at least one pump **92** can be a conventional pump, such as a ball pump and the like configured to provide air pressure. In one aspect, at least a portion of the pump can be positioned within the wall chamber **96** defined between the first surface **36** and the second surface **38** of the dividing wall **12**. The pump can be in sealed fluid communication with the inner tube **90** so that air pressure exerted by the pump can be applied to the tube chamber of the inner tube. A valve **98** can be provided to restrict or restrict air from flowing between the pump **92** and the tube **90**.

To assemble the seal **14** of this embodiment, the inner tube **90** can be positioned in the wall chamber **96** defined between the first surface **36** and the second surface **38** of the dividing wall **12**. The at least one pump can be coupled to the inner tube with other tubes, fasteners and the like so that the at least one pump is in sealed fluid communication with the tube chamber of the tube. Optionally, at least a portion of the pump can be positioned in the wall chamber **96**. The seal body **94** can be coupled to the at least one inner tube **90** and/or the left edge **22**, the right edge **26**, and/or the bottom edge **30** of the dividing wall **12** so that the seal body is a continuous seal extending around at least a portion of the left edge, the right edge and the bottom edge of the dividing wall.

In use, the dividing wall **12** can be positioned in the interior chamber **16** of the cooler **18** with the left edge positioned adjacent to the first wall **24** of the interior chamber **16**, the right edge **26** positioned adjacent to the second wall **28**, and the bottom edge **30** positioned adjacent to the bottom surface **32** of the interior chamber **16**. A user can selectively engage the pump **92** to pressurize the inner tube **90** to a desired pressure, and the pressurized inner tube can urge the seal body **94** away from the dividing wall **12**. At the desired pressure, the inner tube can urge the seal body into contact with the first wall, the second wall, and the bottom surface so that a liquid-tight seal is formed between the dividing wall and the cooler **18**.

If the dividing wall **12** is to be moved to a different location in the cooler **18** or removed altogether, air pressure can be released from tube chamber of the inner tube **90** so that the seal body **94** is not urged away from the dividing wall. For example, the valve **98** can be opened to release air pressure from the tube chamber.

In one aspect, the dividing wall **12** does not need to be positioned in a groove **84** defined in the interior chamber **16**. That is, the dividing wall can be securedly fixed in any desired position in the interior chamber by a friction fit formed between at least a portion of the seal **14** and the wall or bottom surface of the interior chamber without being positioned in the groove. As can be appreciated, liquids trapped in the groove **84** during use with conventional dividers can breed microorganisms such as bacteria and the like. In another aspect, the dividing wall can be formed integrally within the interior chamber **16**. That is, in this aspect, the dividing wall can be manufactured in place in the interior chamber to prevent fluid flow between the plurality of chambers formed by the dividing wall.

In order to accommodate coolers **18** of various sizes, a plurality of dividing walls **12** can be coupled together to form a larger dividing wall. For example, a tongue can be formed in the left edge **22** of a first dividing wall segment, and a groove can be defined in the right edge **26** of a second dividing wall segment. The tongue of the first segment can slide in the groove of the second segment to form the larger dividing wall. Similar mating concepts, such as a dovetail joint and the like are contemplated. The seal **14** as described herein can prevent fluid from flowing between the first dividing wall segment and the second dividing wall segment.

Optionally, a plurality of dividing walls **12** can be provided to be selectively positioned in the interior chamber **16** of the cooler **18** so that the plurality of dividing walls separates the interior chamber into more than two separate chambers.

Although several aspects of the invention have been disclosed in the foregoing specification, it is understood by those skilled in the art that many modifications and other aspects of the invention will come to mind to which the invention pertains, having the benefit of the teaching presented in the foregoing description and associated drawings. It is thus understood that the invention is not limited to the specific aspects disclosed hereinabove, and that many modifications and other aspects are intended to be included within the scope of the appended claims. Moreover, although specific terms are employed herein, as well as in the claims that follow, they are used only in a generic and descriptive sense, and not for the purposes of limiting the described invention.

What is claimed is:

1. A divider device for an interior chamber of a cooler, the divider device comprising:

a dividing wall sized and shaped to correspond to the size and shape of the interior chamber of the cooler; and

a seal supported on the dividing wall, the seal comprising at least one seal body, at least one inner tube, and at least one pump that is part of the dividing wall and is in fluid communication with the at least one inner tube for expanding the inner tube in relation to the seal body;

wherein the dividing wall is insertable into the interior chamber of the cooler, and the at least one inner tube is pressurizable by the at least one pump to urge the at least one seal body into contact with an inner surface of the cooler, such that the dividing wall and the seal divide the interior chamber of the cooler into a plurality of separate chambers and prevent fluid flow between individual chambers of the plurality of separate chambers.

2. The divider device of claim **1**, wherein the at least one inner tube comprises a tube chamber that is in sealed fluid communication with the at least one pump.

3. The divider device of claim **1**, wherein the dividing wall has a first surface, and a second surface opposite the first surface, and wherein the at least one inner tube is positioned between the first surface and the second surface of the dividing wall.

4. The divider device of claim **1**, wherein the at least one inner tube comprises a plurality of inner tubes.

5. The divider device of claim **1**, wherein the dividing wall has a first edge, a second edge opposite the first edge, and a third edge extending between the first edge and the second edge, wherein the first edge is sized to correspond to a height of a first wall of the interior chamber, wherein the second edge is sized to correspond to a height of a second wall of the interior chamber that is opposed to the first wall and wherein the third edge is configured to be positioned on a bottom surface of the interior chamber.

6. The divider device of claim **5**, wherein the seal comprises at least one seal body positioned on at least one of the first edge, the second edge and the third edge of the dividing wall.

7. The divider device of claim 5, wherein the at least one seal body comprises a flexible seal body coupled to at least one of the first edge, the second edge, and the third edge of the dividing wall.

8. The divider device of claim 1, wherein the at least one seal body comprises a flexible seal body coupled to the at least one inner tube.

9. The divider device of claim 1, wherein the at least one seal body comprises a flexible seal body coupled to and forming a continuous seal extending around at least a portion of the first edge, the second edge, and the third edge of the dividing wall.

10. The divider device of claim 1, wherein the at least one inner tube and the at least one seal body are formed from a waterproof material.

11. The divider device of claim 1, wherein the at least one pump is configured to provide air pressure.

12. The divider device of claim 11, wherein the at least one pump comprises a ball pump.

13. The divider device of claim 1, wherein the dividing wall has a first surface, and a second surface opposing the first surface, wherein the dividing wall defines an internal wall chamber between the first surface and the second surface of the dividing wall, and wherein at least a portion of the at least one pump is positioned within the wall chamber.

14. The divider device of claim 13, further comprising:

at least one removable panel matable to the dividing wall and removable from the dividing wall to provide access to the wall chamber.

15. The divider device of claim 1, further comprising a valve connected to restrict a pressurized flow between the at least one pump and the at least one inner tube.

16. The divider device of claim 1, wherein the at least one seal body is coupled to the inner tube.

17. A divider device comprising:

a dividing wall having at least one edge; and

a seal comprising at least one inner tube, at least one seal body positioned along the at least one edge of the dividing wall adjacent the at least one inner tube, and at least one pump that is part of the dividing wall and is in sealed fluid communication with the at least one inner tube for pressurizing the inner tube and expanding the at least one seal body away from the at least one edge of the dividing wall,

wherein the dividing wall is insertable into a correspondingly sized and shaped interior chamber of a cooler, and wherein the at least one inner tube is pressurizable by the at least one pump, to urge the at least one seal body into contact with an inner surface of the cooler such that the dividing wall and the seal cooperate to divide the interior chamber into a plurality of separate chambers and prevent fluid flow between individual chambers of the plurality of separate chambers.

18. The divider device of claim 17, wherein the at least one seal body is coupled to the inner tube.

19. A divider device for an interior chamber of a cooler, the divider device comprising:

a dividing wall sized and shaped to correspond to the size and shape of the interior chamber; and

a seal supported on the dividing wall, the seal comprising at least one seal body, at least one tube, and at least one pump that is part of the dividing wall and is in fluid communication with the at least one tube for expanding the tube in relation to the seal body;

wherein the dividing wall is insertable into the interior chamber of the cooler, and the at least one tube is pressurizable by the at least one pump to urge the at least one seal body into contact with an inner surface of the cooler, such that the dividing wall and the seal divide the interior chamber of the cooler into a plurality of separate chambers.

20. The divider device of claim 19, wherein the dividing wall has a first surface, and a second surface opposing the first surface, wherein the dividing wall defines an internal wall chamber between the first surface and the second surface of the dividing wall, and wherein at least a portion of the at least one pump is positioned within the wall chamber.

21. The divider device of claim 20, further comprising:

at least one removable panel matable to the dividing wall and removable from the dividing wall to provide access to the wall chamber.

22. The divider device of claim 19, wherein the at least one seal body is coupled to the inner tube.

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